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SURVEY DATA
and
PROPOSED MANAGEMENT PROGRAM
for
SOLID WASTE DISPOSAL
in
GRAVEN COUNTY

Prepared By
SANITARY ENGINEERING DIVISION
NORTH CAROLINA STATE BOARD OF HEALTH
Raleigh, N. C.

SECTION I - Introduction

In the overall environmental sanitation picture of rapidly expanding urban communities of North Carolina, the problem of how to handle the estimated 4,511,000 tons of refuse produced annually offers one of our greatest challenges. This is a problem of the community as well as the individual and continual disregard on the part of either will certainly result in unnecessary disease and annoyance. Lack of understanding, carelessness and indifference is largely responsible for our present problems. Frequently, individual effort is fruitless without public control, but, at the same time, efforts of public health agencies are doomed to failure without support of individual citizens.

Refuse which is contaminated with disease organisms originating in the home or institutions provides food and shelter for many of our most important public health pests, insects and rodents. It is, therefore, necessary that refuse be handled in an acceptable manner from the point of origin to that of disposal. Refuse, at the point of origin, is largely the responsibility of the producer and must be stored in an approved manner. Refuse collection is accomplished in three ways: (1) by the individual, (2) by a governmental agency using public funds, and (3) by private contract garbage collectors who are paid by the individual receiving the service. Refuse disposal is normally accomplished by (1) the individual who utilizes his own land or disposal areas belonging to private or public agencies, (2) by governmental agencies who utilize publicly-owned disposal areas or (3) by private collectors who provide their own disposal area or utilize that of a public agency. No longer is the old-fashioned, insanitary refuse dump acceptable in today's society as a means of refuse disposal. An open dump is aesthetically offensive because of smoke and odors and is responsible for the reduction of adjacent land values, and are gradually being replaced by the sanitary landfill or other sanitary means of refuse disposal.

SECTION II - Legal Aspects

Authority to Regulate

Boards of Health

County boards of health have the authority to regulate the collection and disposal of refuse. This authority is based on the broad powers as set forth in G. S. 130-17 which permits boards of health to make rules and regulations as necessary to protect and to advance public health. Such regulations typically cover three major areas:

- (1) The type of container in which garbage is stored.
- (2) Sanitation standards for equipment used in the collection of refuse.
- (3) Standards and methods for disposal.

Attached to this report is a copy of an ordinance that has been prepared for adoption by the local boards of health for the control of storage, collection, and disposal of refuse.

Boards of Commissioners

County boards of commissioners have authority to regulate under G.S. 153-272 through 275, the collection and disposal of refuse by private persons and firms outside municipal boundaries.

In exercising this authority, the board of commissioners may:

- (1) Issue licenses or permits for the collection and disposal of refuse.
- (2) Prohibit collection and disposal by unlicensed persons.
- (3) Grant licensed persons exclusive rights to collect in designated areas.
- (4) Regulate the fees charged for private collection services.
- (5) Operate collection and disposal services.

Authority to Finance

The 1967 General Assembly amended G. S. 153-77 and G. S. 153-80 of the County Finance Act to authorize the issuance of bonds for sanitary landfills and for vehicles and equipment.

SECTION III - The Refuse Problem in Craven County

The survey of Craven County was completed in 1968 and the data has been summarized on the attached table. In addition, the following general information was gathered in regard to the storage, collection, and disposal of refuse.

Storage: Approximately 43,639 people are living in rural areas of Craven County and three of the municipalities where there is no enforcement of adopted administrative regulations governing on-site refuse storage. Refuse is placed on the ground, in 55-gallon barrels, or in other type containers, many of which have no lids. This provides ideal conditions for the breeding and feeding of flies, rats, and other pests.

Collection: The refuse in the municipalities and in about 21 percent of rural Craven County is collected once or twice a week.

Disposal: The study reveals that an estimated 55,674 tons of refuse -- household, commercial, industrial, institutional -- is being collected annually by municipalities and private contractual firms in Craven County. The refuse collected in Craven County is being placed at four land disposal sites which are indicated on the enclosed map. All sites are operated as open dumps.

The study reveals that there are approximately 27,427 people living in rural Craven County who have no collection or disposal service. Computing their annual production rate at less than the urban dweller, an estimated 10,285 tons of refuse is produced by them annually. Part of this tonnage is being burned and part buried, but a large part is cluttering our farms, woodlands, streams, and highways.

SECTION IV - Recommendations

To protect the health of the people of Craven County and to prevent the depreciation of the county's environment, the following plan for storage, collection, and disposal of refuse is recommended.

Storage: Under authority stated in Section II of this report, the Craven County Board of Health should enforce the existing ordinance.

Collection: It is recommended that house-to-house collection in unincorporated areas of Craven County be left to private enterprise (private collectors). The private agencies should be regulated under authority as stated in Section II of this report.

It is also recommended that a container system be provided for collection in those unincorporated areas, and in the small municipalities where house-to-house service is not available, is not economically feasible or where the haul distance is too great for non-compactor trucks.

Disposal: In the preparation of recommendations for the disposal of refuse by sanitary landfill method, it is necessary to consider length of haul, volume of refuse, population density, and cost to county and municipalities. Based on these factors, it is recommended that:

The Craven County Board of Commissioners, in cooperation with the municipalities, provide two sanitary landfills in the general vicinity of the proposed locations shown on the enclosed map to serve the total population of Craven County except the City of New Bern.

After the county sites are opened, the present dumps should be closed and covered with two feet of compacted earth. Note: Soon after these dumps are closed and before they are covered with earth, they should be heavily baited with rat poison for at least two weeks. This will prevent the rat population from migrating to other areas.

There is nothing in these recommendations that would prevent the individual from disposing of his own refuse as long as it is done in a manner approved by the Health Director.

Supervision: In order that adequate supervision may be provided, it is recommended that the Craven County Health Department be put in charge of the operation. This would consist of: promotion of this program, education of the public, and supervision of the landfill operation.

SECTION V - Cost Analysis

The following cost estimates are based on the plan recommended in Section IV of this report for disposal and a container system for collection as recommended in Section IV of this report.

Two (2) sanitary landfills to serve the total population of Craven County other than the City of New Bern.

Site 1

Thirty (30) acres @ \$300/acre	\$ 9,000
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Equipment

One (1) high-lift loader with multi-purpose bucket, cab & heater (Caterpillar 955K or equal)	(On-hand)
One (1) tilt-body trailer	(On-hand)
One (1) dragline	(On-hand)
One (1) pickup truck	2,600

Structure

One (1) structure to provide shelter for equipment, garage, and office space.	5,000
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Miscellaneous

Site preparation (access road, fence, signs, etc.)	<u>6,000</u>
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TOTAL SITE 1	\$22,600
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Site 2

Twelve (12) acres	No Cost
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Equipment

One (1) high-lift loader with multi-purpose bucket, cab & heater (Caterpillar 955K or equal)	\$32,000
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Structure

One (1) structure to provide shelter for equipment and office space	4,000
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Miscellaneous

Site preparation (access road, signs, fence, etc.)	\$ 6,000
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TOTAL SITE 2	\$42,000
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TOTAL CAPITAL INVESTMENT - LANDFILLS	\$64,600
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Capital Investment - Container System

One (1) Mother truck (30 or 31 cu. yd.)	\$30,000
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One hundred (100) containers - 4 cu. yd. @ \$275/container	27,500
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Site preparation - containers @ \$50/container	5,000
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One (1) truck - 1½ tons flat bed	<u>4,500</u>
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TOTAL CAPITAL INVESTMENT - CONTAINER SYSTEM	\$67,000
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Administration of Plan

Legal fees	\$ 1,000
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Plans and surveying	1,000
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Supervision of site selection and preparation	<u>2,000</u>
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TOTAL	\$ 4,000
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TOTAL CAPITAL INVESTMENT	\$135,600
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Annual Operating Cost

Site 1

One (1) solid waste manager	\$ 8,000
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One (1) loader operator	6,000
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Fuel and repairs (loader and pickup)	3,500
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Fuel and repairs (dragline)	1,800
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Equipment depreciation - Loader - \$3,500	4,000
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Pickup \$ 500	
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Miscellaneous (s.s., ins., etc.)	<u>3,000</u>
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TOTAL	\$26,300
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Site 2

One (1) loader operator	\$ 6,000
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One (1) assistant operator (Sites 1 & 2)	5,200
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Fuel and repairs (loader)	3,000
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Fuel and repairs (dragline)	1,000
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Equipment depreciation	3,000
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Miscellaneous (s.s., ins., etc.)	<u>2,000</u>
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TOTAL	\$20,200
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Container System

One (1) mother truck operator	\$ 7,000
Fuel and repairs - mother truck (20,000 miles @ 25¢/mile)	4,000
Fuel and repairs - truck	1,000
Equipment depreciation - Mother truck - \$4,000	7,750
Containers - 2,750	
Truck - 1,000	
Miscellaneous (s.s., ins., etc.)	<u>2,000</u>
TOTAL	\$21,750
Supervision - $\frac{1}{4}$ Sanitarian Supervisors time	2,500
TOTAL ANNUAL OPERATING COST	\$70,750

Notes:

1. Containers would be serviced twice per week or as needed.
2. The containers would serve for household waste only.
3. The annual operating cost per person for disposal and the container system is \$1.15.

SECTION VI - Conclusion

1. The problem of refuse disposal in ^{Hamilton} Craven County is due to a number of factors. There are more disposable items on the market today than ever existed in the past as many containers are no longer the returnable and reusable types, but are disposables. The pounds of disposed items per capita per day have doubled over the past decade. Regardless of whether the area of discussion is rural or urban, the disposable items are still the problem, only the quantity changes.
2. This is a problem that affects the total population from the farmer who is being dumped upon to the person who lives near an open, burning dump.
3. A cooperative effort, involving both the county and municipal governments, can provide an adequate and more economical solution to the solid waste disposal problem in ^{Hamilton} Craven County.

4. The recommendations of this report were made to meet the anticipated needs for a ten-year period. Before the end of this time, exhaustive studies of new methods should be made and incorporated in plans for the future.
5. The Solid Waste and Vector Control Section of the State Board of Health, through your local health department, is available to assist in any way possible.

**SUMMARY OF SOLID WASTE COLLECTION
& DISPOSAL SURVEY DATA**
CRAVEN COUNTY

Total Population: 61,639
Urban: 21,890 Rural: 39,749

Total Area (sq.mi.) 725
Date Compiled: 3 - 68

UNIT	AREA (sq.mi.)	POPULATION	QUANTITY PER ANNUM (tons)	TOTAL EXPENDI- TURES	COLLECTION						DISPOSAL					SEE NOTE NO.
					BY	NO. OF MEN	NO. OF TRUCKS		FREQUENCY		BY	NO. OF MEN	EQUIPMENT		USABLE ACRES	
							COMP.	OTHER	RES.	COMM.			NO.	TYPE		
New Bern	2.7	18,000	49,086	138,000	PA	31	9	3	2 PW	5 PW	OD	1	1	Loader	115	1
Vanceboro		806	2,073		PA						OD	0	0		3	
Havelock		2,433	3,386		PA						OD	0	0		1	
Dover		651	1,129		PA						OD	0	0		1	
Craven County		27,427	10,285			No Collection or Disposal										
													</			

- NOTES:
- This site receives the waste from the town of Bridgeton and 21% of Craven County.




PA - Public Agency

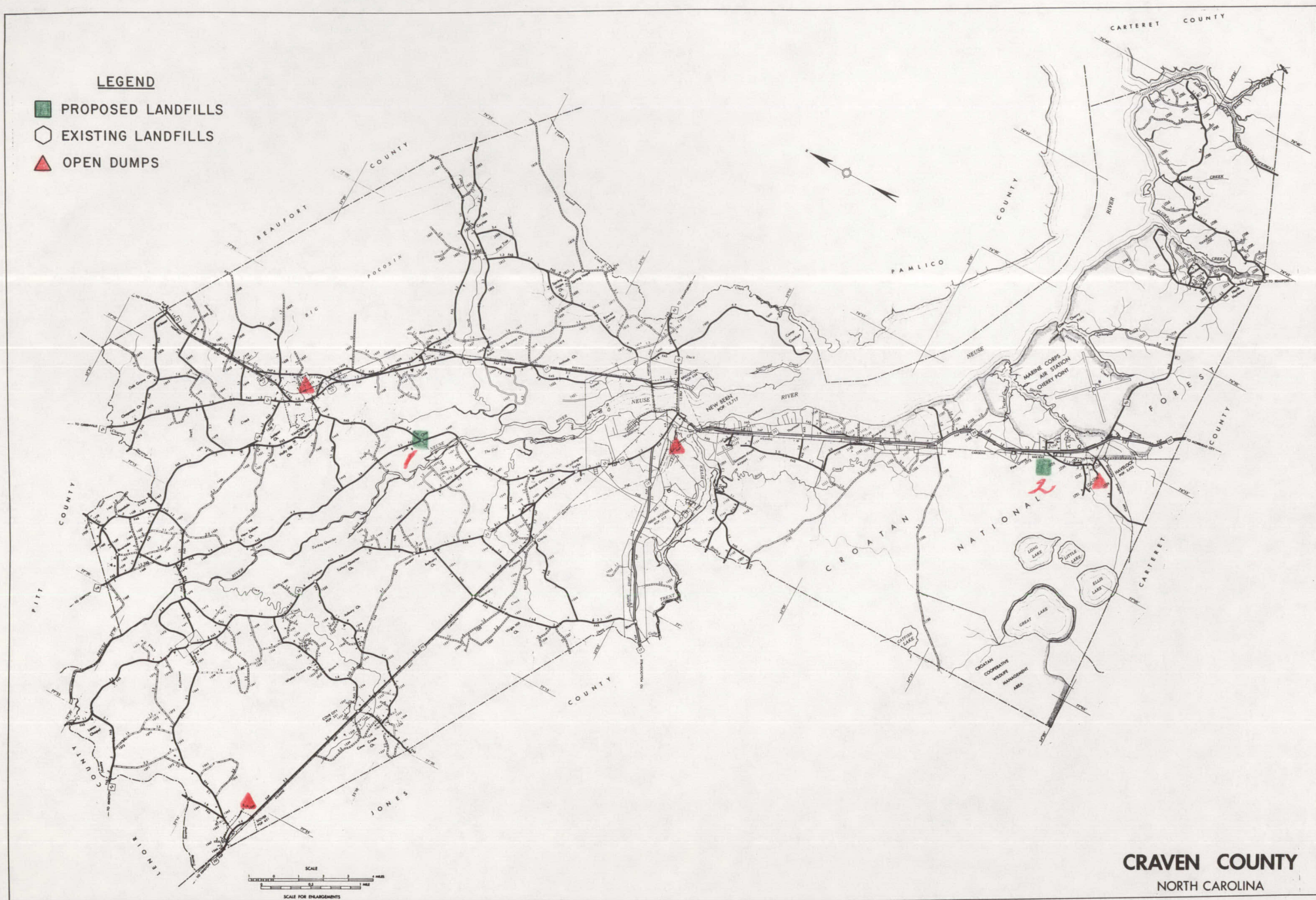
PC - Private Collector

SL - Sanitary Landfill

OD - Open Dump

LEGEND

-  PROPOSED LANDFILLS
-  EXISTING LANDFILLS
-  OPEN DUMPS



CRAVEN COUNTY
NORTH CAROLINA

AN ACT TO AUTHORIZE COUNTIES TO REGULATE THE COLLECTION OF GARBAGE

ARTICLE 22

Garbage Collection and Disposal

G. S. 153-272. Control of Private Collectors. -- The board of county commissioners of any county is hereby empowered to regulate the collection and disposal of garbage by private persons, firms, or corporations outside of the incorporated cities and towns of the county for the purpose of encouraging and attempting to insure an adequate and continuing service of garbage collection and disposal where the board deems it to be desirable. In the exercise of such power, the board may issue a license to any private person, firm, or corporation to collect and/or dispose of garbage; may prohibit the collection and/or disposal of garbage by unlicensed persons, firms, or corporations; may grant to licensed persons, firms, or corporations the exclusive right to collect and/or dispose of garbage for compensation within a specified area and prohibit unauthorized persons, firms, or corporations from collecting and/or disposing of garbage within said area; and may regulate the fees charged by licensed persons, firms, and corporations for the collection and/or disposal of garbage to the end that reasonable compensation may be provided for such services. The board may adopt regulations pursuant to the power herein granted, and the violation of any such regulation shall be a misdemeanor, subject to a fine not exceeding fifty dollars, or imprisonment not exceeding thirty days; each week that any such violation continues to exist shall be a separate offense. (1961, c. 514, s.1)

G. S. 153-273. County collection and disposal. -- The board of county commissioners of any county is hereby empowered to establish and operate garbage collection and/or disposal facilities in areas outside of incorporated cities and towns where, in its opinion, the need for such facilities exists. The board may contract with any city or town to collect and/or dispose of garbage in any such area. In the disposal of garbage, the board may use any vacant land owned by the county, or it may acquire suitable sites for such purpose. The board may make appropriations to carry out the

activities herein authorized. The board may impose fees for the use of disposal facilities, and in the event it shall provide for the collection of garbage, it shall charge fees for such collection service sufficient in its opinion to defray the expense of collection. (1961, c. 514, s.1)

G. S. 153-274. Powers of local boards of health unaffected. -- Nothing in this article shall affect the powers of local boards of health to control the keeping, removal, collection, and disposal of garbage, insofar as the exercise of any such power is necessary to protect and advance the public health. (1961, c. 514, s.1)

G. S. 153-275. Powers granted herein supplementary. -- The powers granted to counties by this article shall be deemed supplementary to any powers heretofore or hereafter granted by any other law, either general, special, or local, for the same or similar purpose, and in any case where the provisions of this article conflict with or are different from the provisions of such other law, the board of county commissioners may in its discretion proceed in accordance with the provisions of such other law, or, as an alternative method, in accordance with the provisions of this article. (1961, c. 514, s.1)

Sec. 1a. The provisions of this Act shall not apply to Vance County.

Note:

Chapter 904 of the 1961 Session Laws exempts Johnston County from all provisions of this article.

Chapter 912 of the 1961 Session Laws authorizes Dare County Board of Commissioners to levy ad valorem tax in areas of the county in which the county provides garbage collection service.

RULES AND REGULATIONS GOVERNING THE STORAGE, COLLECTION,
TRANSPORTING, AND DISPOSAL OF REFUSE IN _____
COUNTY, NORTH CAROLINA

Be It Ordained By The _____ Board of Health:

That the following regulations for the protection of public health are hereby adopted pursuant to authority granted by Section 17 of Chapter 130 of the General Statutes of North Carolina, and shall govern the storage, collection, transporting, and disposal of refuse throughout _____ County, except that these regulations shall not apply to the area within any municipality, sanitary district, or other governmental unit which operates its own refuse collection and disposal system.

SECTION I - DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these regulations:

- A. The word "refuse" means garbage or rubbish.
- B. The word "garbage" means all putrescible solid wastes, including vegetable matter, animal offal, and carcasses of small animals, but excluding human body wastes, animal manure, and recognizable industrial by-products. Used milk cartons, or other discarded food containers that are not dry and clean shall be included in this definition.
- C. The word "rubbish" means non-putrescible solid wastes.
- D. The term "Health Director" means the director of the _____ County Health Department, or his authorized representative.
- E. The word "person" means any individual, firm, governmental unit, organization, partnership, corporation, or company.
- F. The term "refuse collector" means any person who collects or transports refuse, other than one who removes refuse from his own premises.

SECTION II - REFUSE STORAGE

No owner, occupant, tenant, or lessee of any premises shall permit any garbage or other refuse to accumulate upon such premises that is not stored in a manner approved by the Health Director.

- (1) Garbage shall be stored in a container of a type approved by the Health Director. Every such container shall be constructed of metal, or equally durable material, in such a manner as to be strong, water tight, not easily corrodible, fly proof, and rodent proof, shall have a capacity of not more than 32 gallons; shall have handles designed for lifting; and shall have fly-tight covers which shall be kept in place at all times, except when garbage or other refuse is being deposited in or removed from such container. A sufficient number of containers shall be provided to hold at least one week's accumulation of garbage. Each garbage container shall be kept clean so that no odor or other nuisance will exist.

- (2) Rubbish shall be stored in such a manner that it will not provide harborage to rats, nor cause a fire hazard.

SECTION III - REFUSE COLLECTION

The owner, occupant, tenant, or lessee of any premises upon which garbage is stored shall remove, or cause to be removed, all garbage from said premises at least once a week. Refuse collectors shall remove all refuse from the premises, when they receive compensation for this service, at least once a week. The work shall be done in a clean and orderly manner, without causing damage to the container. Any refuse that is spilled shall be cleaned up, and the premises left in a sanitary condition.

SECTION IV - REFUSE TRANSPORTATION

No refuse collector shall transport refuse in a conveyance that has not been approved by the Health Director. Such conveyances shall be leak proof, and covered with a canvas, or other substantial material, unless it is constructed in such a manner as to prevent leakage or spillage of the refuse. Truck beds in which garbage is hauled shall be cleaned daily.

SECTION V - REFUSE DISPOSAL

No refuse collector, or other person, shall dispose of refuse, except by one of the following methods; provided that this section shall not be construed to prevent any person from properly disposing of refuse from his own residence, or business establishment, by burning or burying it in a safe and sanitary manner approved by the Health Director.

- (1) By burning refuse in an incinerator of a type approved by the Health Director as safe and sanitary.
- (2) By burying refuse in a sanitary landfill that is designed, operated, and equipped in accordance with the recommendations in Special Bulletin No. 479 of the North Carolina State Board of Health, Refuse Disposal By Sanitary Landfill. This bulletin is hereby incorporated by reference pursuant to authority granted by Article 4 of Chapter 130 of the General Statutes of North Carolina, and becomes a part of these regulations as fully as if set out verbatim herein. A copy of said bulletin is on file in the office of the Clerk of the Superior Court of _____ County, and in the office of the Health Director.

SECTION VI - REFUSE COLLECTOR PERMITS

- A. No person shall collect, transport, or dispose of refuse without a written permit from the Health Director; provided that this sub-section shall not apply to any person disposing of refuse from his own residence, or business establishment. The Health Director shall issue such permit only when, upon inspection, he finds that the facilities, equipment, and proposed operating methods of the applicant are in compliance with the requirements of these regulations.

SECTION VII - REVOCATION OF PERMITS

- A. Whenever upon the inspection of facilities, equipment, or operating methods of any person holding a permit to collect, transport, or dispose of refuse, the Health Director finds that conditions or practices exist which are in violation of the provisions of these regulations, the Health Director shall give notice in writing to such person that unless such conditions or practices are corrected within ten days, the permit will be revoked. At the end of such ten-day period, the Health Director shall make a re-inspection, and if he finds that such conditions or practices have not been corrected, he shall give notice in writing to such person that his permit has been revoked. Upon the receipt of this notice, such person shall immediately cease to collect, transport, or dispose of refuse. No such permit shall be reinstated by the Health Director until he finds, upon inspection, that all provisions of these regulations have been complied with, except that following a hearing, as hereinafter provided, such permit may be reinstated by order of the County Board of Health.
- B. Upon written petition from a person whose permit to collect, transport, or dispose of refuse has been denied or revoked, the County Board of Health shall hold a hearing at which time such person shall be given an opportunity to show that his permit should not have been denied or revoked. No such hearing shall be held unless written petition therefor shall have been filed in the office of the Health Director on or before the tenth day following the day on which said permit was denied or revoked. The Health Director shall convey the request for a hearing to the Chairman of the County Board of Health as soon as practicable. Such hearing shall be held within _____ days following the receipt of such petition by the Chairman. After such hearing, the County Board of Health may either approve the denial or revocation of such permit, or order that it be issued or reinstated, depending upon its findings as to whether or not these regulations have been complied with.

SECTION VIII - PENALTY

Any person who violates any rules and regulations adopted by a local Board of Health shall be guilty of a misdemeanor, and fined not exceeding fifty dollars (\$50) or imprisoned not exceeding thirty days (30), as provided by Section 203 of Chapter 130 of the General Statutes of North Carolina

SECTION IX - CONFLICTING REGULATIONS REPEALED

All regulations or parts of regulations in conflict herewith are repealed only to the extent necessary to give these regulations full force and effect.

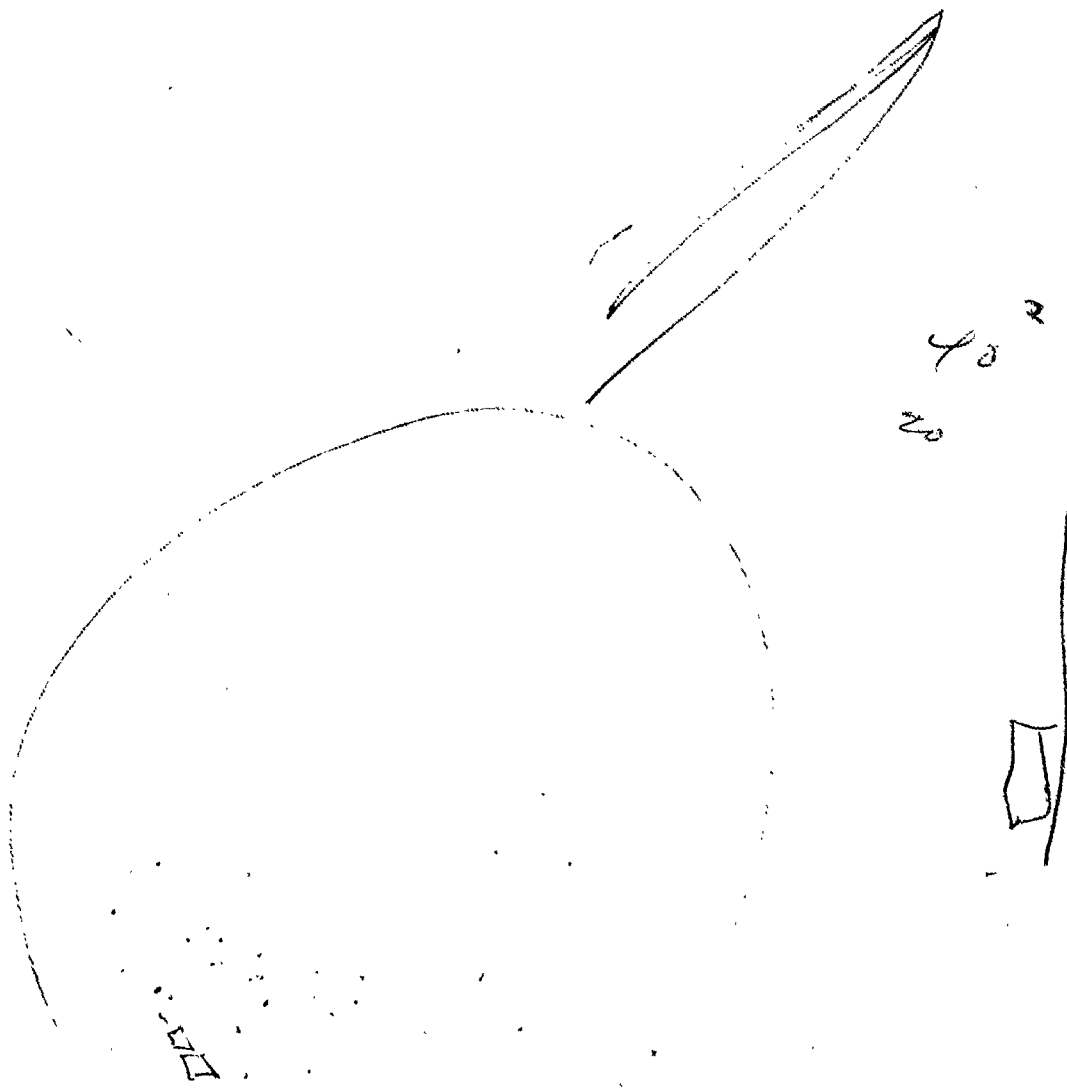
SECTION X - SEVERABILITY

If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

SECTION XI - EFFECTIVE DATE

These regulations shall be in full force and effect from and after _____.

(35)



(35)

(35)

SURVEY DATA
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The study reveals that there are approximately 27,427 people living in rural Craven County who have no collection or disposal service. Computing their annual production rate at less than the urban dweller, an estimated 10,285 tons of refuse is produced by them annually. Part of this tonnage is being burned and part buried, but a large part is cluttering our farms, woodlands, streams, and highways.

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It is also recommended that a container system be provided for collection in those unincorporated areas, and in the small municipalities where door-to-door service is not available, is not economically feasible or where the haul distance is too great for non-compactor trucks.

Disposal: In the preparation of recommendations for the disposal of refuse by sanitary landfill method, it is necessary to consider length of haul, volume of refuse, population density, and cost to county and municipalities. Based on these factors, it is recommended that:

~~_____~~
The Craven County Board of Commissioners, in cooperation with the municipalities, provide two sanitary landfills in the general vicinity of the proposed locations shown on the enclosed map to serve the total population of Craven County *except the City of New Bern*.

Plan II

- (a) The Craven County Board of Commissioners, in cooperation with the small municipalities, provide two sanitary landfills in the general vicinity of the proposed locations shown on the enclosed map to serve their population, and
- (b) The City of New Bern provide one sanitary landfill for the city population.

After the county sites are opened, the present dumps should be closed and covered with two feet of compacted earth. Note: Soon after these dumps are closed and before they are covered with earth, they should be

heavily baited with rat poison for at least ^{Two} weeks. This will prevent the rat population from migrating to other areas.

There is nothing in these recommendations that would prevent the individual from disposing of his own refuse as long as it is done in a manner approved by the Health Director.

Supervision: In order that adequate supervision may be provided, it is recommended that the Craven County Health Department be put in charge of the operation. This would consist of: promotion of this program, education of the public, and supervision of the landfill operation.

SECTION V - Cost Analysis

The following cost estimates are based on ^{the} ~~Plan I or Plan II~~ as recommended in Section IV of this report for disposal and a container system for collection as recommended in Section IV of this report.

~~Plan I~~

Two (2) sanitary landfills to serve the total population of Craven County.

Capital Investment Disposal

Site I (To serve New Bern and the northern half of the county)

Site of fifty (50) acres @ \$300/acre \$15,000

Equipment

One (1) high lift loader with multi-purpose bucket, cab and heater (Caterpillar 977K or equal) \$45,000

Structure

One (1) structure to provide shelter for equipment and office space \$ 3,000

Miscellaneous

Site preparation (access road, signs, etc.) \$ 4,000

Total Capital Investment Site I \$67,000

~~old~~ ~~figures~~ 7 copies

Two (2) sanitary landfills to serve the total population of Crocker Co. other than the City of New Bern.

Site #1

Thirty⁽³⁰⁾ acres @ 300/acre

\$ 9000

Equipment:

One (1) high lift loader with multi-

purpose bucket, car + heater (Caterpillar 955K or equal) (on-hand)

One (1) Tilt-Body Trailer (on-hand)

One (1) drag-line (on-hand)

Structure: One (1) pick-up truck \$1,600

One (1) structure to provide shelter for equipment, garage, + office space.

\$ 5000

Misc:

Site Preparation (acres road, fence, signs + etc) 6,000

Total site #1 \$ 52,600

Site #2

Twelve (12) acres

71. Cost

Equipment:

One (1) high lift loader with multi-purpose

bucket, car + heater (Caterpillar 955K or equal) \$ 35,000

Structure:

One (1) structure to provide shelter for equipment

+ office space

\$ 4000

Miss:

Site prep. (access road, signs, fence & etc)

\$ 6000

Total Site # 2

\$ 44,600 4200

Total Capital Investment Landfills

\$ 64,600

Capital Investment Container System

One (1) Motherbank (300-30 cu yd)

\$ 30000

One hundred (100) containers - 4 cu. yd @ \$75/cont.

\$ 7,500

Site preparation containers @ 30/cont.

5,000

One (1) truck 1 1/2 ton flat bed

4,500

Total Cap. Inv. Container System

\$ 67,000

Administrative of Plant

Legal fees

\$ 1000

Plan & Surveying

1000

Supervision of site selection & preparation 2000

Total \$ 4000

Total Capital Invest.

\$ 135,600

Annual operating Cost

Site #1

One (1) solid waste Manager	\$ 8000
One (1) loader operator	6000
Fuel + repair (Loader + pick-up)	3500
Fuel + repair (Drag-line)	1800
Equipment dep. - Loader	3500
Pick-up	500
	4000
Misc. - (S.S. Inc. + etc)	3000
Total	\$ 21,300

Site #2

One (1) loader operator	\$ 6000
One (1) Assistant operator (sites 1 + 2)	5000
Fuel + repair (Loader)	3000
Fuel + repair (Drag-line)	1000
Equipment dep.	3000
Misc. (S.S. Inc. + etc)	5000
Total	\$ 20,200

Container System

One (1) Matheson generator	\$ 7000
Fuel + Repair Matheson Tank (20,000 @ .25¢/gal)	4,000
Fuel + repair tank	1,000
Equipment dep. Matheson Tank	4000
Container	2750
Truck	1000
	\$ 7750

Misc. (S.S. km + etc)

Total

2000
31750
2500
70,750

Supervisors - 4 Sen. Supervisor Team

Total Annual operating cost.

NOTES.

- (1) Containers would be serviced twice per week or as needed.
- (2) The containers would serve for household waste only.
- (3) The annual operating cost per person for the designed and the container system is \$1.15

Equipment depreciation -
Miscellaneous

mod. to 4000
Container 2310

\$ ~~4,000~~ 6310
2,000

Total annual operating cost

\$16,000 19310

Note:

1. The loader operator at Site I would be trained to relieve the Dumpmaster operator.
2. The assistant loader operator at Site I would also be the relief operator for Site II.
3. Containers would be serviced twice per week or as needed.
4. The container would serve for household waste only. Other type waste would be transported to the disposal site by the individual or by contract collection.
5. Capital Investment per person:

Disposal:

Plan I - \$1.78 per person
Plan II - \$2.11 per person
Container System - \$.98 per person

Annual Operation Cost per person:

Disposal:

Plan I - \$.69 per person
Plan II -
Plan II (a) - \$.89 per person
Plan II (b) - \$1.25 per person
Container System - \$.41 per person

SECTION VI - Conclusion

(1) The problem of refuse disposal in Craven County is due to a number of factors. There are more disposable items on the market today than ever existed in the past as many containers are no longer the returnable and reusable types, but are disposables. The pounds of disposed items per capita per day have doubled over the past decade. Regardless of whether the area of discussion is rural or urban, the disposable items are still the problem, only the quantity changes.

(2) This is a problem that affects the total population from the farmer who is being dumped upon to the person who lives near an open, burning dump.

(3) A cooperative effort, involving both the county and municipal governments, can provide an adequate and more economical solution to the solid waste disposal problem in Craven County.

(4) The recommendations of this report were made to meet the anticipated needs for a ten-year period. Before the end of this time, exhaustive studies of new methods should be made and incorporated in plans for the future.

(5) The Solid Waste and Vector Control Section of the State Board of Health, through your local health department, is available to assist in any way possible.

Total Population: <u>61,639</u>		SUMMARY OF SOLID WASTE COLLECTION & DISPOSAL SURVEY DATA <u>CRAVEN COUNTY</u>	Total Area (sq.mi.) <u>725</u>
Urban: <u>21,890</u>	Rural: <u>39,749</u>		Date Compiled: <u>3 - 68</u>

Date Compiled: 3 - 68

[illegible]

NOTES:

1. This site receives the waste from the town of Bridgeton and 21% of Craven County.

OD - Open Dump

RULES AND REGULATIONS GOVERNING THE STORAGE, COLLECTION,
TRANSPORTING, AND DISPOSAL OF REFUSE IN _____
COUNTY, NORTH CAROLINA

Be It Ordained By The _____ Board of Health:

That the following regulations for the protection of public health are hereby adopted pursuant to authority granted by Section 17 of Chapter 130 of the General Statutes of North Carolina, and shall govern the storage, collection, transporting, and disposal of refuse throughout _____ County, except that these regulations shall not apply to the area within any municipality, sanitary district, or other governmental unit which operates its own refuse collection and disposal system.

SECTION I - DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these regulations:

- A. The word "refuse" means garbage or rubbish.
- B. The word "garbage" means all putrescible solid wastes, including vegetable matter, animal offal, and carcasses of small animals, but excluding human body wastes, animal manure, and recognizable industrial by-products. Used milk cartons, or other discarded food containers that are not dry and clean shall be included in this definition.
- C. The word "rubbish" means non-putrescible solid wastes.
- D. The term "Health Director" means the director of the _____ County Health Department, or his authorized representative.
- E. The word "person" means any individual, firm, governmental unit, organization, partnership, corporation, or company.
- F. The term "refuse collector" means any person who collects or transports refuse, other than one who removes refuse from his own premises.

SECTION II - REFUSE STORAGE

No owner, occupant, tenant, or lessee of any premises shall permit any garbage or other refuse to accumulate upon such premises that is not stored in a manner approved by the Health Director.

- (1) Garbage shall be stored in a container of a type approved by the Health Director. Every such container shall be constructed of metal, or equally durable material, in such a manner as to be strong, water tight, not easily corrodible, fly proof, and rodent proof; shall have a capacity of not more than 32 gallons; shall have handles designed for lifting; and shall have fly-tight covers which shall be kept in place at all times, except when garbage or other refuse is being deposited in or removed from such container. A sufficient number of containers shall be provided to hold at least one week's accumulation of garbage. Each garbage container shall be kept clean so that no odor or other nuisance will exist.

- (2) Rubbish shall be stored in such a manner that it will not provide harborage to rats, nor cause a fire hazard.

SECTION III - REFUSE COLLECTION

The owner, occupant, tenant, or lessee of any premises upon which garbage is stored shall remove, or cause to be removed, all garbage from said premises at least once a week. Refuse collectors shall remove all refuse from the premises, when they receive compensation for this service, at least once a week. The work shall be done in a clean and orderly manner, without causing damage to the container. Any refuse that is spilled shall be cleaned up, and the premises left in a sanitary condition.

SECTION IV - REFUSE TRANSPORTATION

No refuse collector shall transport refuse in a conveyance that has not been approved by the Health Director. Such conveyances shall be leak proof, and covered with a canvas, or other substantial material, unless it is constructed in such a manner as to prevent leakage or spillage of the refuse. Truck beds in which garbage is hauled shall be cleaned daily.

SECTION V - REFUSE DISPOSAL

No refuse collector, or other person, shall dispose of refuse, except by one of the following methods; provided that this section shall not be construed to prevent any person from properly disposing of refuse from his own residence, or business establishment, by burning or burying it in a safe and sanitary manner approved by the Health Director:

- (1) By burning refuse in an incinerator of a type approved by the Health Director as safe and sanitary.
- (2) By burying refuse in a sanitary landfill that is designed, operated, and equipped in accordance with the recommendations in Special Bulletin No. 479 of the North Carolina State Board of Health, Refuse Disposal By Sanitary Landfill. This bulletin is hereby incorporated by reference pursuant to authority granted by Article 4 of Chapter 130 of the General Statutes of North Carolina, and becomes a part of these regulations as fully as if set out verbatim herein. A copy of said bulletin is on file in the office of the Clerk of the Superior Court of _____ County, and in the office of the Health Director.

SECTION VI - REFUSE COLLECTOR PERMITS

- A. No person shall collect, transport, or dispose of refuse without a written permit from the Health Director; provided that this subsection shall not apply to any person disposing of refuse from his own residence, or business establishment. The Health Director shall issue such permit only when, upon inspection, he finds that the facilities, equipment, and proposed operating methods of the applicant are in compliance with the requirements of these regulations.

SECTION VII - REVOCATION OF PERMITS

- A. Whenever upon the inspection of facilities, equipment, or operating methods of any person holding a permit to collect, transport, or dispose of refuse, the Health Director finds that conditions or practices exist which are in violation of the provisions of these regulations, the Health Director shall give notice in writing to such person that unless such conditions or practices are corrected within ten days, the permit will be revoked. At the end of such ten-day period, the Health Director shall make a reinspection, and if he finds that such conditions or practices have not been corrected, he shall give notice in writing to such person that his permit has been revoked. Upon the receipt of this notice, such person shall immediately cease to collect, transport, or dispose of refuse. No such permit shall be reinstated by the Health Director until he finds, upon inspection, that all provisions of these regulations have been complied with, except that following a hearing, as hereinafter provided, such permit may be reinstated by order of the County Board of Health.
- B. Upon written petition from a person whose permit to collect, transport, or dispose of refuse has been denied or revoked, the County Board of Health shall hold a hearing at which time such person shall be given an opportunity to show that his permit should not have been denied or revoked. No such hearing shall be held unless written petition therefor shall have been filed in the office of the Health Director on or before the tenth day following the day on which said permit was denied or revoked. The Health Director shall convey the request for a hearing to the Chairman of the County Board of Health as soon as practicable. Such hearing shall be held within ___ days following the receipt of such petition by the Chairman. After such hearing, the County Board of Health may either approve the denial or revocation of such permit, or order that it be issued or reinstated, depending upon its findings as to whether or not these regulations have been complied with.

SECTION VIII - PENALTY

Any person who violates any rules and regulations adopted by a local Board of Health shall be guilty of a misdemeanor, and fined not exceeding fifty dollars (\$50) or imprisoned not exceeding thirty days (30), as provided by Section 203 of Chapter 130 of the General Statutes of North Carolina.

SECTION IX - CONFLICTING REGULATIONS REPEALED

All regulations or parts of regulations in conflict herewith are repealed only to the extent necessary to give these regulations full force and effect.

7

SECTION X - SEVERABILITY

If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

SECTION XI - EFFECTIVE DATE

These regulations shall be in full force and effect from and after

SED
3/1/63

$$\textcircled{70} - \textcircled{60+}$$

$\textcircled{90}$

① ✓

(12)

(12)

SURVEY DATA
and
PROPOSED MANAGEMENT PROGRAM
for
SOLID WASTE DISPOSAL
in
CRAVEN COUNTY

Prepared By
SANITARY ENGINEERING DIVISION
NORTH CAROLINA STATE BOARD OF HEALTH
Raleigh, N. C.

SECTION I - Introduction

In the overall environmental sanitation picture of rapidly expanding urban communities of North Carolina, the problem of how to handle the estimated 4,511,000 tons of refuse produced annually offers one of our greatest challenges. This is a problem of the community as well as the individual and continual disregard on the part of either will certainly result in unnecessary disease and annoyance. Lack of understanding, carelessness and indifference is largely responsible for our present problems. Frequently, individual effort is fruitless without public control, but, at the same time, efforts of public health agencies are doomed to failure without support of individual citizens.

Refuse which is contaminated with disease organisms originating in the home or institutions provides food and shelter for many of our most important public health pests, insects and rodents. It is, therefore, necessary that refuse be handled in an acceptable manner from the point of origin to that of disposal. Refuse, at the point of origin, is largely the responsibility of the producer and must be stored in an approved manner. Refuse collection is accomplished in three ways: (1) by the individual, (2) by a governmental agency using public funds, and (3) by private contract garbage collectors who are paid by the individual receiving the service. Refuse disposal is normally accomplished by (1) the individual who utilizes his own land or disposal areas belonging to private or public agencies, (2) by governmental agencies who utilize publicly-owned disposal areas or (3) by private collectors who provide their own disposal area or utilize that of a public agency. No longer is the old-fashioned, insanitary refuse dump acceptable in today's society as a means of refuse disposal. An open dump is aesthetically offensive because of smoke and odors and is responsible for the reduction of adjacent land values, and are gradually being replaced by the sanitary landfill or other sanitary means of refuse disposal.

SECTION II - Legal Aspects

Authority to Regulate

Boards of Health

County boards of health have the authority to regulate the collection and disposal of refuse. This authority is based on the broad powers as set forth in G. S. 130-17 which permits boards of health to make rules and regulations as necessary to protect and to advance public health. Such regulations typically cover three major areas:

- (1) The type of container in which garbage is stored.
- (2) Sanitation standards for equipment used in the collection of refuse.
- (3) Standards and methods for disposal.

Attached to this report is a copy of an ordinance that has been prepared for adoption by the local boards of health for the control of storage, collection, and disposal of refuse.

Boards of Commissioners

County boards of commissioners have authority to regulate under G.S. 153-272 through 275, the collection and disposal of refuse by private persons and firms outside municipal boundaries.

In exercising this authority, the board of commissioners may:

- (1) Issue licenses or permits for the collection and disposal of refuse.
- (2) Prohibit collection and disposal by unlicensed persons.
- (3) Grant licensed persons exclusive rights to collect in designated areas.
- (4) Regulate the fees charged for private collection services.
- (5) Operate collection and disposal services.

Authority to Finance

The 1967 General Assembly amended G. S. 153-77 and G. S. 153-80 of the County Finance Act to authorize the issuance of bonds for sanitary landfills and for vehicles and equipment.

SECTION III - The Refuse Problem in Craven County

The survey of Craven County was completed in 1968 and the data has been summarized on the attached table. In addition, the following general information was gathered in regard to the storage, collection, and disposal of refuse.

Storage: Approximately 43,639 people are living in rural areas of Craven County and three of the municipalities where there is no enforcement of adopted administrative regulations governing on-site refuse storage. Refuse is placed on the ground, in 55-gallon barrels, or in other type containers, many of which have no lids. This provides ideal conditions for the breeding and feeding of flies, rats, and other pests.

Collection: The refuse in the municipalities and in about 21 percent of rural Craven County is collected once or twice a week.

Disposal: The study reveals that an estimated 55,674 tons of refuse -- household, commercial, industrial, institutional -- is being collected annually by municipalities and private contractual firms in Craven County. The refuse collected in Craven County is being placed at four land disposal sites which are indicated on the enclosed map. All sites are operated as open dumps.

The study reveals that there are approximately 27,427 people living in rural Craven County who have no collection or disposal service. Computing their annual production rate at less than the urban dweller, an estimated 10,285 tons of refuse is produced by them annually. Part of this tonnage is being burned and part buried, but a large part is cluttering our farms, woodlands, streams, and highways.

SECTION IV - Recommendations

To protect the health of the people of Craven County and to prevent the depreciation of the county's environment, the following plan for storage, collection, and disposal of refuse is recommended.

Storage: Under authority stated in Section II of this report, the Craven County Board of Health should enforce the existing ordinance.

Collection: It is recommended that house-to-house collection in unincorporated areas of Craven County be left to private enterprise (private collectors). The private agencies should be regulated under authority as stated in Section II of this report.

It is also recommended that a container system be provided for collection in those unincorporated areas, and in the small municipalities where door-to-door service is not available, is not economically feasible or where the haul distance is too great for non-compactor trucks.

Disposal: In the preparation of recommendations for the disposal of refuse by sanitary landfill method, it is necessary to consider length of haul, volume of refuse, population density, and cost to county and municipalities. Based on these factors, it is recommended that:

Plan I

The Craven County Board of Commissioners, in cooperation with the municipalities, provide two sanitary landfills in the general vicinity of the proposed locations shown on the enclosed map to serve the total population of Craven County.

Plan II

- (a) The Craven County Board of Commissioners, in cooperation with the small municipalities, provide two sanitary landfills in the general vicinity of the proposed locations shown on the enclosed map to serve their population, and
- (b) The City of New Bern provide one sanitary landfill for the city population.

After the county sites are opened, the present dumps should be closed and covered with two feet of compacted earth. Note: Soon after these dumps are closed and before they are covered with earth, they should be

heavily baited with rat poison for at least a week. This will prevent the rat population from migrating to other areas.

There is nothing in these recommendations that would prevent the individual from disposing of his own refuse as long as it is done in a manner approved by the Health Director.

Supervision: In order that adequate supervision may be provided, it is recommended that the Craven County Health Department be put in charge of the operation. This would consist of: promotion of this program, education of the public, and supervision of the landfill operation.

SECTION V - Cost Analysis

The following cost estimates are based on Plan I or Plan II as recommended in Section IV of this report for disposal and a container system for collection as recommended in Section IV of this report.

Plan I

Two (2) sanitary landfills to serve the total population of Craven County.

Capital Investment Disposal

Site I (To serve New Bern and the northern half of the county)

Site of fifty (50) acres @ \$300/acre	\$15,000
---------------------------------------	----------

Equipment

One (1) high lift loader with multi-purpose bucket, cab and heater (Caterpillar 977K or equal)	\$45,000
--	----------

Structure

One (1) structure to provide shelter for equipment and office space	\$ 3,000
---	----------

Miscellaneous

Site preparation (access road, signs, etc.)	<u>\$ 4,000</u>
---	-----------------

Total Capital Investment Site I	\$67,000
---------------------------------	----------

Site II (To serve Havelock and the southern half of the county)

Site of ten (10) acres @ \$300/acre \$ 3,000

Equipment

One (1) high lift loader with multi-purpose bucket,
cab and heater (Caterpillar 955K or equal) \$32,000

Structure

One (1) structure to provide shelter for the equipment
and office space \$ 3,000

Miscellaneous

Site preparation (access road, signs, etc.) \$ 2,000

Total Capital Investment Site II \$40,000

Administration of Plan I

Legal fees \$ 500
Surveying and Plans 1,000
Supervision of site selection, preparation, etc. 1,000

Total \$ 2,500

Total Capital Investment for Disposal Plan I

Site I \$ 67,000
Site II 40,000
Administration 2,500
Total \$109,500

Plan II

Three (3) sanitary landfills to serve the total population of Craven County.

a. Two (2) sanitary landfills to serve the total population of Craven
County except the City of New Bern.

b. One (1) sanitary landfill to serve the City of New Bern exclusively.

Plan II (a)

Site I (To serve the northern half of the county and the small municipalities
in that area)

Site of twenty (20) acres @ \$300/acre \$ 6,000

Equipment

One (1) high lift loader with multi-purpose bucket, cab and heater (Caterpillar 955B or equal)	\$32,000
--	----------

Structure

One (1) structure to provide shelter for the equipment and office space	\$ 3,000
---	----------

Miscellaneous

Site preparation (access road, signs, etc.)	<u>\$ 3,000</u>
---	-----------------

Capital Investment Site I	\$44,000
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Site II (To serve Havelock and southern half of county)

Site of ten (10) acres @ \$300/acre	\$ 3,000
-------------------------------------	----------

Equipment

One (1) high lift loader with multi-purpose bucket, cab and heater (Caterpillar 951B or equal)	\$25,000
--	----------

Structure

One (1) structure to provide shelter for equipment and office space	\$ 3,000
---	----------

Miscellaneous

Site preparation (access road, signs, etc.)	<u>\$ 2,000</u>
---	-----------------

Total Capital Investment Site II	\$33,000
----------------------------------	----------

Administration of Plan II (a)

Legal fees	\$ 500
Surveying and Plans	1,000
Supervision of site selection, preparation, etc.	<u>1,000</u>

Total	\$ 2,500
-------	----------

Total Capital Investment for disposal Plan II (a)	\$79,500
---	----------

Plan II (b)

Site

One (1) site to serve the City of New Bern

Site of thirty (30) acres @ \$300/acre	\$ 9,000
--	----------

Equipment

One (1) high lift loader with multi-purpose bucket, cab and heater (Caterpillar 955K or equal)	\$32,000
---	----------

Structure

One (1) structure to provide shelter for equipment and office space	\$ 3,000
--	----------

Miscellaneous

Site preparation (access road, trenching, signs, etc.)	<u>\$ 5,000</u>
--	-----------------

Capital Investment Plan II (b)	\$49,000
--------------------------------	----------

Administration of Plan II (b)

Legal fees	\$ 300
Surveying and Plans	500
Supervision of site selection, preparation, etc.	<u>500</u>

Total	\$ 1,300
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Total Capital Investment Plan II (b)	<u>\$50,300</u>
--------------------------------------	-----------------

Total Capital Investment for Disposal Plan II

Site I - Plan II (a)	\$44,000
Site II - Plan II (a)	33,000
Administration - Sites I and II - Plan II (a)	2,500
Site I - Plan II (b)	49,000
Administration - Site I - Plan II (b)	<u>1,300</u>

Total	\$129,800
-------	-----------

Total Capital Investment Plan I	<u>109,500</u>
---------------------------------	----------------

Plan I Saves over Plan II	\$ 20,300
---------------------------	-----------

Capital Investment for Container System
As Recommended in Section IV of These Plans

Craven County

One (1) Dumpmaster (24 cu. yd.)	\$23,000
Sixty (60) containers, 4 cu. yd. each @ \$250/container	15,000
Site preparation container @ \$50/container	<u>3,000</u>

Total	\$41,000
-------	----------

Town of Dover

Four (4) containers - 8 cu. yd. each @ \$495/container	\$ 1,980
Total	\$ 1,980

Town of Cove City

Four (4) containers (8 cu. yd. each @ \$495/container	\$ 1,980
Total	\$ 1,980

Total Capital Investment Container System	\$44,860
---	----------

Note: The dragline owned by Craven County would be used for trenching in Plan I and Plan II (a). Allowance is made for trenching under Miscellaneous in Plan II (b).

..... Estimated Annual Operation Cost for Disposal Plan I

Site I - Plan I

One (1) loader operator	\$ 6,000
One (1) assistant loader operator	5,200
Fuel and Repairs (loader)	3,500
Fuel and Repairs (dragline - $\frac{1}{4}$ time)	2,000
Equipment depreciation	6,000
Miscellaneous (s.s., insurance, etc.)	<u>3,000</u>
Total	\$25,700

Site II - Plan I

One (1) loader operator	\$ 5,200
Fuel and Repairs (loader)	3,000
Fuel and Repairs (dragline - $\frac{1}{8}$ time)	1,000
Equipment depreciation	4,000
Miscellaneous (s.s., insurance, etc.)	<u>1,500</u>

Total	\$14,700
Supervision of Plan I ($\frac{1}{2}$ Sanitarian Supervisor time)	<u>2,500</u>

Total Cost for Disposal Plan I	\$42,900
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Estimated Annual Operation Cost for Disposal Plan II

Site I - Plan II (a)

One (1) loader operator	\$ 6,000
One (1) assistant loader operator	5,200
Fuel and Repair (loader)	2,800
Fuel and Repair (dragline - $\frac{1}{8}$ time)	<u>1,000</u>

Equipment depreciation	\$ 3,500
Miscellaneous (s.s., insurance, etc.)	<u>2,000</u>

Total	\$20,500
-------	----------

Site II - Plan II (a)

One (1) loader operator	\$ 5,200
Fuel and Repairs (loader)	2,500
Fuel and Repairs (dragline - 1/8 time)	1,000
Equipment depreciation	3,000
Miscellaneous (s.s., insurance, etc.)	<u>2,000</u>

Total	\$13,700
-------	----------

Plan II (b)

One (1) loader operator	\$ 6,000
One (1) assistant loader operator	5,800
Fuel and Repairs (loader)	2,800
Equipment depreciation	3,500
Miscellaneous (s.s., insurance, trenching, etc.)	<u>5,000</u>

Total	\$22,500
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Supervision Plan II (a and b)

Plan II (a) - $\frac{1}{4}$ Sanitarian Supervisor time	\$ 2,500
Plan II (b) - 1/8 Director of Public Works time	<u>1,800</u>

Total	\$ 4,300
-------	----------

Total Annual Operation Cost Plan II

Site I - Plan II (a)	\$20,500
Site II - Plan II (a)	13,700
Site for Plan II (b)	22,500
Supervision Plan II (a and b)	<u>4,300</u>

Total	\$61,000
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Total Annual Operation Cost Plan II	\$61,000
Total Annual Operation Cost Plan I	<u>42,900</u>

Amount Plan I Saves Annually	\$18,100
------------------------------	----------

Annual Operation Cost Container System

One (1) Dumpmaster operator	\$ 6,000
Fuel and Repairs (20,000 miles @ \$.25/mile)	<u>4,000</u>

Equipment depreciation	\$ 4,000
Miscellaneous	<u>2,000</u>
Total	\$16,000

Note:

1. The loader operator at Site I would be trained to relieve the Dumpmaster operator.
2. The assistant loader operator at Site I would also be the relief operator for Site II.
3. Containers would be serviced twice per week or as needed.
4. The container would serve for household waste only. Other type waste would be transported to the disposal site by the individual or by contract collection.
5. Capital Investment per person:

Disposal:

Plan I - \$1.78 per person
 Plan II - \$2.11 per person
 Container System - \$.98 per person

Annual Operation Cost per person:

Disposal:

Plan I	\$.69 per person
Plan II	
Plan II (a)	\$.89 per person
Plan II (b)	\$1.25 per person
Container System	\$.41 per person

SECTION VI - Conclusion

(1) The problem of refuse disposal in Craven County is due to a number of factors. There are more disposable items on the market today than ever existed in the past as many containers are no longer the returnable and reusable types, but are disposables. The pounds of disposed items per capita per day have doubled over the past decade. Regardless of whether the area of discussion is rural or urban, the disposable items are still the problem, only the quantity changes.

(2) This is a problem that affects the total population from the farmer who is being dumped upon to the person who lives near an open, burning dump.

(3) A cooperative effort, involving both the county and municipal governments, can provide an adequate and more economical solution to the solid waste disposal problem in Craven County.

(4) The recommendations of this report were made to meet the anticipated needs for a ten-year period. Before the end of this time, exhaustive studies of new methods should be made and incorporated in plans for the future.

(5) The Solid Waste and Vector Control Section of the State Board of Health, through your local health department, is available to assist in any way possible.

CRAVEN COUNTY

Urban: 21,890 Rural: 39,749

Date Compiled: 3 - 68

NOTES:

- PA - Public Agency

PC - Private Collector

SL - Sanitary Landfill

OD - Open Dump

LEGEND

- PROPOSED LANDFILLS
- EXISTING LANDFILLS
- OPEN DUMPS

